Who is Accountable for the Milestones?

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Introduction

We believe that the recently introduced postgraduate radiology milestones are a sadly accurate example of the old saying, "The road to hell is paved with good intentions." A joint initiative of the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Radiology (ABR), the milestones are intended to improve educational quality. However, our experiences and those of many of our colleagues lead us to believe that the milestones are producing more harm than good. As such, the milestone experience offers important lessons that should be lost on no educator.

Milestones

The milestones represent progressive competency-based outcomes that residents and fellows are meant to demonstrate as they move through their training. In diagnostic radiology residency, there are 12 major subcompetency topics for which level-specific milestones have been created for trainee education and assessment (1). Among the stakeholders in the project are the Radiology Residency Review Committee, the ABR, the Association of Program Directors in Radiology, and at any one time, thousands of trainees in radiology.

The milestones were developed as an integral part of the Next Accreditation System (NAS), a broad new paradigm of trainee evaluation and program accreditation developed by the ACGME, whose aim is to emphasize educational outcomes rather than measures of the learning process (2). The milestones were meant to provide concise, concrete expectations for performance at every level of training. These stepwise developmental outcomes and evaluation systems are intended to provide a more transparent framework of graduate medical education (GME), at least when compared with past models.

The milestones system is designed to enhance self-directed trainee learning and self-assessment, providing more helpful feedback for professional development (3). The NAS's milestone model requires all programs to develop assessment tools and criteria by which to measure trainee performance, as well as create new standing educational committees called clinical competency committees. Clinical competency committees are required to meet at least semiannually to review the clinical performances of all trainees, a timetable that is intended to allow for earlier identification of struggling learners.

The milestones are also intended to benefit training programs, allowing good programs to innovate and flourish while providing assistance to struggling programs. The new process allows successful programs to develop materials and curricula that can be shared with other institutions, helping to develop a new framework of GME best practices. The programs with excellent outcomes can then share their innovative teaching methods and help improve the quality of GME across the country.

When implemented by struggling residency programs, the milestones help to quickly identify educational and curricular gaps. These programs can then focus on developing specific educational content and assessment tools to shore up the deficiencies. The ACGME also states that the NAS will benefit programs by decreasing the overall administrative burden, at least in comparison to the conventional accreditation paradigm. It will do so, the ACGME suggests, by moving away from a site-visit driven model of residency accreditation and toward one of continuous monitoring, with lengthening of intervals between in-person accreditation visits (2).

The milestones are also intended to serve a much broader nationwide interest, providing better public accountability for GME. Through the production of aggregate milestone data reports, the ACGME can track specialty performance nationwide. Outcomes gathered in this way can be reported to public groups and appropriate medical organizations as concrete evidence of accountability in GME (3).

Of course, another substantial beneficiary of the milestones, one that is rarely discussed with stakeholders, is the ACGME itself. The considerable number of federal dollars supporting GME has

generated increased scrutiny of the ACGME, which is understandably keen to demonstrate that it exercises tight professional oversight (4). To this end, the milestones offer the ACGME a means to generate outcomes data to show that its oversight is indeed serving the needs of society.

Benefits and Costs

Some educators have compared the ACGME's approach to public accountability to that of the American Board of Medical Specialties and its member boards, including the ABR, which have spawned elaborate new maintenance of certification programs. These programs appear to represent a commitment to continued professional development and public accountability. However, the latter has encountered widespread opposition, in part because its benefits and costs appear to not have been well understood (5).

The milestones were not developed or introduced in a vacuum. Postgraduate training programs were already working harder than ever before to keep up with already expanding ACGME program requirements. These have included the development and maintenance of resident education portfolios, duty-hours monitoring, ongoing trainee self-assessment and learning plans, quality projects, scholarly activities, annual fatigue compliance, case log tracking, procedure log tracking, annual ACGME surveys of residents and faculty, annual program surveys, evaluations of report quality, and summative evaluations of each resident, to name but a few (6).

The pace and intensity of change in GME and radiology in particular have been well described elsewhere, and many program directors who have survived the waves of change over the past half-dozen years have described their experience as a "perfect storm" (7). The underlying philosophy seems to be that we can enhance education and prove that we are educating well by rapidly reforming education in ways that produce more standardization, systemization, and documentation.

But more is not necessarily better. Changing too little can take a toll, not only on those failing to change but on those failing to call for and enact change. But so can attempting to change too radically and too quickly. In principle, calls for educational change that are large in magnitude and rapid in pace

represent an implicit indictment of what has gone before, including existing curricula, instructional designs, assessment techniques, and the people who were responsible for them—program directors, program coordinators, and the people with oversight responsibility for radiology education (8).

Most program directors we talk to are strong trainee advocates and exhibit passion for making a difference for residents and patients and for the profession. Above all, they want their trainees to know that they are committed to helping them become good radiologists. In today's GME environment, however, many program directors feel that their time and energy are nearly exhausted serving the interests of accrediting agencies, not trainees. They spend too much time adhering to an ever-expanding list of policies, devising ways to ensure trainee compliance, and filling out forms. Little or no time and energy remain to build relationships with and mentor trainees.

When such conversations do occur, experienced program directors and coordinators have reported a dramatic change. Historically, semiannual review meetings with trainees included a substantial amount of time learning about trainees' lives and looking for ways to help them overcome obstacles and thrive. Residents are real people who struggle with issues that affect us all, including depression, anxiety, substance abuse, work-life balance, marital problems, and financial difficulties. These days, however, many program directors feel that they are held hostage by checkbox reviews, spending most of their one-on-one time assessing levels of compliance with complex rules and policies.

This loss of time for what really counts represents one of the greatest costs of the milestones, the NAS, and much of the regulatory burden created by the ACGME over the past 10 years. The NAS may, in fact, have pushed GME beyond the tipping point, to the point where the mountain of administrative rules and regulatory oversight now harms the very people it was designed to protect.

Whether the benefits of initiatives such as the milestones warrant these steep costs is very much in doubt. How deep and fine-grained is our understanding of the attendant risks and costs? At a time when

medicine is seeking to become more evidence based, why are such sweeping changes being repeatedly implemented without evidence that they actually enhance education?

It is a sad irony that the ACGME, which promotes practice-based learning and improvement as one of the six resident core competencies, does not appear to hold itself to this standard when it mandates large-scale changes in GME. Why are trials not first conducted at a small number of institutions, before such high administrative costs are imposed on program directors, their support staff, and trainees? Why are more multi-institutional studies not conducted prior to implementation?

The sweeping change brought about by the recent implementation of the NAS is eerily similar to the dramatic duty-hours restrictions that went into effect in 2003 after the release of the Institute of Medicine report, Crossing the Quality Chasm (9). The initial impetus for new duty-hours rules can be traced to media coverage regarding errors at teaching institutions, such as the Libby Zion case in New York, as well as public response to controversial reports of increased medical errors linked to physician fatigue (10,11). Later studies seemed to indicate a direct link between sleep deprivation and the performance of clinical staff (12–15).

Prior to implementing its new compulsory duty-hours policy, however, the ACGME appears to have had no reliable data to show that the benefits of its plan would outweigh its costs. In fact, the risks of the policy were largely unknown. Despite this, the GME community was forced to adapt to the restrictions and develop means by which to monitor trainee compliance.

By 2005, multi-institutional studies were showing mixed patient outcomes after the implementation of duty-hours restrictions, with some investigators actually pointing to declines in patient outcome measures (16,17). This has led to new multicenter trials for some specialties (the Individualized Comparative Effectiveness of Models Optimizing Patient Safety and Resident Education, or iCOMPARE, trial for internal medicine and the Flexibility in Duty Hour Requirements for Surgical Trainees, or FIRST,

trial for general surgery), which are being conducted to evaluate the benefits of a relaxation of the duty-hours rules (18,19).

Why are individuals and organizations that so ardently push for change in GME not more curious and less insistent? Why do they not operate in an experimental mode instead of an imperative one? And why are they not more committed to learning from what the best programs are doing, instead of making all programs follow their models? Part of the problem is that each new accreditation regimen, recognizing that its tenure is relatively short, strives to make its own mark on the educational landscape, and in so doing rushes change into practice before it can be adequately tested and validated.

No one is arguing that the individuals and organizations pushing such initiatives have bad intentions. In most cases, they are very committed people who have devoted many years to their professions. But good intentions do not guarantee good results. It is quite possible that in 5 or 10 years, program directors and trainees will recognize that piling on the great administrative burdens that have been imposed on them functions primarily as a distraction from the real work at hand—namely, teaching and mentoring.

A major issue here is trust. Subjecting everyone involved in education—administrators, educators, and learners—to the same elaborate requirements creates the impression that bright and responsible people cannot be trusted to do their jobs properly. Increasingly, the radiology profession is relying on systems and not people. While such an approach may have merit when the task is turning out widgets or landing aircraft, it is not so effective when it comes to education, in large part because human beings are not widgets or aircraft. We believe that the time is now to restore the appropriate educational balance between systems and people.

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